Office Action Summary	Application No.	Applicant(s)	
	10/070,202	LALLET ET AL.	
	Examiner	Art Unit	
	Andy S. Rao	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 January 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-52* is/are pending in the application.

4a) Of the above claim(s) *15-50* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14, 51-52* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date. _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Re-Opening of Prosecution After Rendered Decision

1. Upon further consideration of the Rendered Decision of the BPAI of 1/16/09, a new ground of rejection is made for the claims as set forth below.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-14 and 51-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Riek et al., (hereinafter referred to as "Riek") in view of Chen et al., (hereinafter referred to as "Chen").

Riek discloses an apparatus for controlling the amount of data used to transmit still images during or after the transmission of a video sequence from a first to a second location (Riek: column 4, lines 15-25; column 11, lines 5-10 and 45-50), the apparatus comprising: encoding means arranged for intraframe encoding still images (Riek: column 4, lines 35-40 and 53-56) for transmission and intraframe encoding part or all of selected video sequence frames (Riek: column 7, lines 40-50); calculating means for determining the data size (Riek: column 8, lines 6, lines 55-67) of intraframe encoded video sequence frames (Riek: column 6, lines 30-50), and control means for controlling intraframe encoding of still images for transmission in dependence on the determined intraframe encoded size of a video sequence frame (Riek: column

7, lines 40-50), as in claim 1. However, Riek fails to disclose intraframe only encoding of still images and controlling the intraframe encoding of still images for transmission in dependence of the determined intraframe encoded size of a previous video sequence, as in the claim. But the modification of Riek of to use intraframe only encoding for still images is a modification to Riek that would be readily apparent to one of ordinary skill in the art because it is merely the elimination of the use of P and B frames from the still frame encoding process and one that the courts have already established as obvious, *In re Karlson, 136 USPQ 184 (CCPA)* & *In re Wilson, 153 USPQ 740 (CCPA 1967)*. Accordingly, given this established legal conclusion and Riek, it would have been obvious for one of ordinary skill in the art to eliminate P and B frames from the still frame encoding process of Riek in order to streamline the still frame encoding function by eliminating the need for motion compensation for still frame encoding (I frames require no motion compensation), as put forth by the Examiner and upheld by the BPAI (Decision of 1/16/09: page 7, lines 1-24; page 8, lines 1-5). The Riek apparatus, as modified to implement only I frame only still frame encoding, has a majority of the features of claim 1, but still fails to disclose controlling the intraframe encoding of still images for transmission in dependence of the determined intraframe encoded size of a previous video sequence. Chen discloses a pseudo-bit rate video coding method with quantization parameter adjustment that controls the encoding of sequences images for transmission in dependence of the determined intraframe encoded size (Chen: column 9, lines 50-60: generated "intrabits" is the actual coded bit amount from the most recent I-frame and used in the calculation of $SGOP_{\alpha}$ and $SGOPBITS_{\alpha}$-1) of a previous video sequence (Chen: column 9, lines 35-50; column 10, lines 10-20 & 48-52: a previous GOP, or even a previous SGOP, is used for current frame bit allocation/coding by

using a current SGOP) in order to overcome exigent problems with conventional bit rate coding control such as sudden changes in video quality within frames and within frame sequences (Chen: column 3, lines 15-25), and one of ordinary skill in the art would associate this very same problem of the occurrence of sudden changes of video quality with the Riek coding apparatus which seeks to encode high fidelity still images in an MPEG bitstream (Riek: column 3, lines 45-55). Accordingly, given this teaching it would have been obvious for one of ordinary skill in the art to incorporate the Chen teaching of controlling the encoding of images for transmission in dependence of the determined intraframe encoded of a previous video sequence into the already modified Riek apparatus in order to account of sudden changes in video quality within frames and frame sequences. The Riek apparatus, as modified to implement only I frame only still frame encoding and modified with the Chen teaching of controlling the encoding of images for transmission in dependence of the determined intraframe encoded of a previous video sequence, has all of the features of claim 1.

Regarding claim 2, the Riek apparatus, as modified to implement only I frame only still frame encoding and modified with the Chen teaching of controlling the encoding of images for transmission in dependence of the determined intraframe encoded of a previous video sequence, has that the encoding means is arranged to intraframe encode part or all of each video sequence frame and the control means is arranged to control intraframe only encoding of a still image in dependence (Riek: column 4, lines 65-67; column 5, lines 1-20) on the determined size of the most recently intraframe encoded video sequence frame (Chen: column 9, lines 35-50), as in the claim.

Regarding claim 3, the Riek apparatus, as modified to implement only I frame only still frame encoding and modified with the Chen teaching of controlling the encoding of images for transmission in dependence of the determined intraframe encoded of a previous video sequence, has wherein the control means is arranged to select a quantization factor for use in encoding of a still image (Riek: column 4, lines 50-60; column 7, lines 40-50) in dependence on the determined intraframe encoded size of a previous video sequence frame (Chen: column 9, lines 35-50), as in the claim.

Regarding claim 4, the Riek apparatus, as modified to implement only I frame only still frame encoding and modified with the Chen teaching of controlling the encoding of images for transmission in dependence of the determined intraframe encoded of a previous video sequence, has wherein the control means is arranged to select (Riek: column 4, lines 55-61), in dependence on the determined intraframe encoded size of a previous video sequence frame (Chen: column 9, lines 35-50)), a first quantization factor for use in encoding a first part of a still image and a second quantization factor for use in encoding a second part of a still image (Riek: column 5, lines 5-10), as in the claim.

Regarding claim 5, the Riek apparatus, as modified to implement only I frame only still frame encoding and modified with the Chen teaching of controlling the encoding of images for transmission in dependence of the determined intraframe encoded of a previous video sequence, has wherein that the encoding means is arranged to carry out an encoding process in which an image is considered to comprise a plurality of blocks, each of which is intraframe only encoded (Riek: column 5, lines 38-54), as in the claim.

Regarding claim 6, the Riek apparatus, as modified to implement only I frame only still frame encoding and modified with the Chen teaching of controlling the encoding of images for transmission in dependence of the determined intraframe encoded of a previous video sequence, has wherein that the control means is arranged to control intraframe only encoding of still images with the aim of keeping the data size of the encoded image within predetermined limits (Riek: column 7, lines 50-60).

Regarding claim 7, the Riek apparatus, as modified to implement only I frame only still frame encoding and modified with the Chen teaching of controlling the encoding of images for transmission in dependence of the determined intraframe encoded of a previous video sequence, has wherein that the encoding and transmission of the still images is compatible with the scheme used for encoding and transmitting of the video sequence (Riek: column 4, lines 25-35), as in the claim.

Riek discloses method for controlling the amount of data used to transmit still images during or after the transmission of a video sequence from a first to a second location (Riek: figures 3-6; column 11, lines 5-10 and 45-50), the method comprising the steps of: intraframe encoding (Riek: column 4, lines 35-40 and 53-56) part or all of selected video sequence frames (Riek: column 5, lines 25-55); determining the data size (Riek: column 6, lines 55-67) of intraframe encoded video sequence frames (Riek: column 6, lines 30-50), and when sending a still image, controlling intraframe encoding of said image in dependence on the determined intraframe encoded size of a video sequence frame (Riek: column 7, lines 40-50), as in claim 8. However, Riek fails to disclose intraframe only encoding of still images and controlling the intraframe encoding of still images for transmission in dependence of the determined intraframe

encoded size of a previous video sequence, as in the claim. But the modification of Riek of to use intraframe only encoding for still images is a modification to Riek that would be readily apparent to one of ordinary skill in the art because it is merely the elimination of the use of P and B frames from the still frame encoding process and one that the courts have already established as obvious, *In re Karlson, 136 USPQ 184 (CCPA)* & *In re Wilson, 153 USPQ 740 (CCPA 1967),* as put forth by the Examiner and upheld by the BPAI (Decision of 1/16/09: page 7, lines 1-24; page 8, lines 1-5). Accordingly, given this established legal conclusion and Riek, it would have been obvious for one of ordinary skill in the art to eliminate P and B frames from the still frame encoding process of Riek in order to streamline the still frame encoding function by eliminating the need for motion compensation for still frame encoding (I frames require no motion compensation). The Riek method, as modified to implement only I frame only still frame encoding, has a majority of the features of claim 8, but still fails to disclose controlling the intraframe encoding of still images for transmission in dependence of the determined intraframe encoded size of a previous video sequence. Chen discloses a pseudo-bit rate video coding method with quantization parameter adjustment that controlling the encoding of images for transmission in dependence of the determined intraframe encoded size (Chen: column 9, lines 50-60: generated "intrabits" is the actual coded bit amount from the most recent I-frame and used in the calculation of $SGOP_{\alpha}$ and $SGOPBITS_{\alpha}$-1) of a previous video sequence (Chen: column 9, lines 35-50; column 10, lines 10-20 & 48-52: a previous GOP, or even a previous SGOP, is used for current frame bit allocation/coding by using a current SGOP) in order to overcome exigent problems with conventional bit rate coding control such as sudden changes in video quality within frames and within frame sequences (Chen: column 3, lines 15-25), and one of ordinary

skill in the art would associate this very same problem of the occurrence of sudden changes of video quality with the Riek coding apparatus which seeks to encode high fidelity still images in an MPEG bitstream (Riek: column 3, lines 45-55). Accordingly, given this teaching it would have been obvious for one of ordinary skill in the art to incorporate the Chen teaching of controlling the encoding of images for transmission in dependence of the determined intraframe encoded of a previous video sequence into the already modified Riek method in order to account of sudden changes in video quality within frames and frame sequences. The Riek method, as modified to implement only I frame only still frame encoding and modified with the Chen teaching of controlling the encoding of images for transmission in dependence of the determined intraframe encoded of a previous video sequence, has all of the features of claim 8.

Regarding claim 9, the Riek method, as modified to implement only I frame only still frame encoding and modified with the Chen teaching of controlling the encoding of images for transmission in dependence of the determined intraframe encoded of a previous video sequence, discloses intraframe only encoding part or all of each video sequence frame and controlling intraframe encoding of a still image (Riek: column 4, lines 65-67; column 5, lines 1-20) in dependence on the determined size of the most recently intraframe encoded video sequence frame (Chen: column 9, lines 35-50), as in the claim.

Regarding claim 10, the Riek method, as modified to implement only I frame only still frame encoding and modified with the Chen teaching of controlling the encoding of images for transmission in dependence of the determined intraframe encoded of a previous video sequence, discloses selecting a quantization factor for use in encoding a still image in dependence (Riek:

column 4, lines 50-60; column 7, lines 40-50) on the determined intraframe encoded size of a previous video sequence frame (Chen: column 9, lines 35-50), as in the claim.

Regarding claim 11, the Riek method, as modified to implement only I frame only still frame encoding and modified with the Chen teaching of controlling the encoding of images for transmission in dependence of the determined intraframe encoded of a previous video sequence, discloses the step of selecting (Riek: column 5, lines 55-61), in dependence on the determined intraframe encoded size of a previous video sequence frame (Chen: column 9, lines 35-50), a first quantization factor for use in encoding a first part of a still image and a second quantization factor for use in encoding a second part of a still image (Riek: column 5, lines 5-10, as in the claim.

Regarding claim 12, the Riek method, as modified to implement only I frame only still frame encoding and modified with the Chen teaching of controlling the encoding of images for transmission in dependence of the determined intraframe encoded of a previous video sequence (Chen: column 9, lines 35-50), discloses that the encoding process is one in which an image is considered to comprise a plurality of blocks each of which is intraframe only encoded (Riek: column 5, lines 38-54), as in the claim

Regarding claim 13, the Riek method, as modified to implement only I frame only still frame encoding and modified with the Chen teaching of controlling the encoding of images for transmission in dependence of the determined intraframe encoded of a previous video sequence, discloses that the intraframe encoding of still images is conducted with the aim of keeping the data size of the encoded image within predetermined limits (Riek: column 7, lines 50-60).

Regarding claim 14, the Riek method, as modified to implement only I frame only still frame encoding and modified with the Chen teaching of controlling the encoding of images for transmission in dependence of the determined intraframe encoded of a previous video sequence, discloses that the encoding and transmission of the still images is compatible with the scheme used for encoding and transmitting of the video sequence (Riek: column 4, lines 25-35).

Regarding claim 51, the Riek apparatus, as modified to implement only I frame only still frame encoding and modified with the Chen teaching of controlling the encoding of images for transmission in dependence of the determined intraframe encoded of a previous video sequence, has encoding means arranged for intraframe only encoding still images for transmission (Riek: column 4, lines 15-25; column 11, lines 5-10 and 45-50), the encoding process being one in which a still image is considered to comprise a plurality of blocks each of which is intraframe only encoded (Riek: column 5, lines 25-38); calculating means for determining the data size of intraframe only encoded blocks (Riek: column 7, lines 55-67); and control means for controlling encoding of selected blocks (Riek: column 7, lines 40-50)in dependence on the determined data size of one or more previously encoded block (Chen: column 9, lines 35-65), as in the claim.

Regarding claim 52, the Riek apparatus, as modified to implement only I frame only still frame encoding and modified with the Chen teaching of controlling the encoding of images for transmission in dependence of the determined intraframe encoded of a previous video sequence, has encoding means arranged for intraframe only encoding still images for transmission (Riek: column 4, lines 15-25; column 11, lines 5-10 and 45-50), the encoding process being one in which a still image is considered to comprise a plurality of blocks each of which is intraframe only encoded (Riek: column 4, lines 35-40); calculating means for determining the data size of

part of an intraframe encoded image comprising at least one intraframe only encoded block (Riek: column 7, lines 40-50); judging means for determining whether the determined data size of said part of an intraframe encoded image falls within a preselected range (Riek: column 7, lines 50-67); and control means for causing re-encoding of said part of an intraframe only coded frame (Rick: column 5, lines 53-57), prior to transmission, in such a way as to change the data size of said part of an intraframe coded image when the determined data size falls outside the preselected range (Riek: column 10,lines 40-67), as in the claim.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy S. Rao whose telephone number is (571)-272-7337. The examiner can normally be reached on Monday-Friday 8 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571)-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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